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Changing Methods In Motivation Research

by W. T. TUCKER*

Few business controversies are hotter today than the one that has been raging for several years over motivation research. As in most such controversies, both sides have overstated the case so seriously that the basic point is often lost or overlooked in the confusion.

Motivation research has arisen from the simple notion that business can gain immeasurably by predicting correctly what people will do in response to product, marketing, or internal policy changes. This, of course, is not a new notion. The present complex business world is possible only because of a rather certain knowledge that employees will be motivated to report for work under certain conditions, that housewives will purchase trousers for their sons and dresses for their daughters, and that the bank teller won't abscond with a load of greenbacks just because he wants the money.

Motivation research has, in a sense, been one of man's primary activities for thousands of years. Most of us have built up a fairly good set of notions about what motivates our family, immediate friends, and close co-workers. We can predict with remarkable success what George will feel and do when the company changes its commission policy—can even understand his motives well enough to figure out the best way of breaking the news to him, in effect modifying his reactions.

Now, if all motivation research meant was the effort by any method to understand motives better, the current controversy would be much less violent. Instead, the term, "Motivation Research," has come to refer to only a few, limited methods for determining motives. And these methods derive directly from one of the most fascinating and fanciful areas of human activity. Clinical psychology, replete with its sexual symbols and seething subconscious, has apparently succeeded in making its

depth interviews and projective techniques synonymous with motivation research in the minds of most businessmen. This is, of course, a ridiculous situation.

Clinical psychology has developed methods for the diagnosis of major psychic disturbances. Perhaps its most valuable contribution in terms of normal research lies in its organized concept of subsconscious activities and its development of means by which these can be inferred. These projective techniques are, according to authorities, difficult to apply and uncertain. The resulting diagnosis of the nature of the conflict is tentative and treatment varies in similar cases from talking about the matter for some practitioners to electro-shock therapy for others. In other words, clinical psychology is more experienced at diagnosis than at treatment, although one might suggest that the only test of the accuracy of a diagnosis lies in the relative success of the treatment. To a large extent the recommendations of a motivation research report are parallel to the recommended treatment prescribed by the clinical psychologist. Therefore, there can be little wonder on the part of even the most casual observer of psychiatric practice that motivation research recommendations have led to both startling successes and equally startling failures.

The problem business faces is not so much to determine whether motivation research is a cureall or so much nonsense (the apparent points of view of the loudest talkers) but to find out the circumstances under which the methods of clinical psychology can best be used and the extent to which they can be relied on.

In order to suggest the proper value of such methods, let's examine the process of motivation research in some detail. A bank, for instance, may want to know how potential customers feel about the institution with the notion that if motives for

*Dr. Tucker is associate professor of marketing in the School of Business Administration, Georgia State College of Business Administration, Atlanta, Georgia.

patronizing and not patronizing it are known, changes can be made which will lead to an increase in the number of depositors and borrowers. The motivation research expert will take on this task by selecting a method. Perhaps he will use the depth interview technique where highly trained specialists talk at great length with each member of the sample for an hour or two-searching out with indirect questions his hopes and fears, the organization of his personality, and the particular psychic satisfactions he looks for in bank service. Perhaps he will use a projective technique, asking what other people think of the bank-with the knowledge that most people will respond with what they think, often admitting indirectly to attitudes they would normally not reveal. Perhaps the motivation research expert would show the person being interviewed a sketch of a person standing at a teller's window and ask for an imaginary story to fit the picture. Here, again, the expectation is that the story will reveal to trained eyes the motivation structure of the person telling the story.

In most cases the number of persons interviewed is small: 50 is a normal sample, 100 a large one. The method of sampling is usually haphazard rather than random. That is, the relationship of the sample to the entire group being studied is not known. There are, of course, reasons for these oversights. Interviewing is costly since a high degree of training is necessary and each interview takes much time. Satisfactory interviewers may be paid \$10.00 or more an hour and the average interview seldom runs less than the full 60 minutes—often much more. Good reason for limiting interviews.

Failure to insist on a representative sample is explained by the concept of personality which is held by motivation research. It has adopted an idea which has been accepted by some psychologists and virtually all anthropologists. This notion is that people in a particular society are essentially like one another, that they have the same hopes and fears, the same motives, and differ only in their more superficial characteristics. And, since motives are normally accepted to be central personality traits, it is generally thought by those in motivation rereach that the size and accuracy of the sample are relatively unimportant.

It should be obvious to qualified market research men or social scientists that these methods are essentially similar to those used in many areas to develop hypotheses or possible explanations. In other words, the motivation researcher is actually looking for possibilities, rather than probabilities. His methods derive from clinical psychology—not experimental psychology or social psychology. In the last analysis, he guesses everything, proves nothing.

But this is not a basic failure in method, if it is recognized. One can hardly overstate the value of methods which can in a rather explicit way define possible motives or suggest possible improvements in products or policies. The difficulty lies in the fact that what purports to be motivation research is incomplete. The businessman needs to know not only what the possible motives are but how they are balanced and distributed in the group he is interested in and how projected changes will be responded to by that group. And most present motivation research can give him none of this information. What is needed is the kind of verification and quantification that experimental psychology has so often been called upon to provide for the clinicians' hypotheses.

Quantitative methods which can give the businessman such detailed information are available. They are currently in use by the social psychologist and the experimental psychologist. And their qualifications are high, despite the fact that they have been little used in business research. Unfortunately, most such methods do not have steps labelled one, two, and three. Rather they are bits and pieces which must be properly combined for each new problem in order to provide an experimental test.

In order to show how one of these methods might be applied to a particular problem, let us imagine that the motivation report on the bank, suggested

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School of Business Administration

George E. Manners, Dean

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above, indicates that banks stand in the mind of most people as a father symbol and, therefore, the feelings of the average depositor or borrower are ambivalent; that the best way to make use of these contradictory feelings would be to replace the female tellers with older men so that depositors will impress the father image with what is presumed to be an approved act; further, that all small leans should be negotiated by women, since there remains a strong subconscious stigma to borrowing and the borrower would rather have a mother image than a father image know his weakness.

The bank might find this a highly disconcerting report, all its tellers being women and all its loan personnel, men.

Let's imagine further that there are several strong reasons for continuing to use women as tellers, but that the bank management has largely used men to handle small loans simply because of tradition or a general notion that borrowers preferred to deal with men. The bank would like to consider women for personal loans work if it was reasonably sure that the advantages will outweigh the temporary discomfort of a personnel policy change.

One way in which to test the motivation research recommendation would be to put one woman to work in personal loans as a test case. Seemingly this would be a simple matter. After a few months the records of her loans or the numbers of persons who apparently were pleased with having her handle their loans would indicate something about preferences. However, so many uncontrolled factors would enter into the situation that no experimentalist would be satisfied with the significance of the results as a test of the hypothesis that borrowers prefer to borrow through women employees.

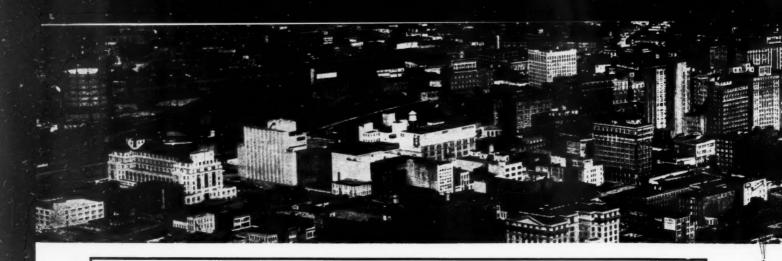
The test would lack what are termed controls. First, is the woman typical of those who would later be hired? Certainly no individual is ever typical of a group. The bank would undoubtedly hire the person it thought best for the job, and she might be markedly superior to any general group of female employees the bank could later hire. Or, because of some personality trait, undiscovered in the hiring procedure, she might be far inferior to the average woman in the job at satisfying the motives referred to by the motivation research report. Further, the test employee would probably be subject to the well known "Hawthorne effect," located by the Western Electric Company when it discovered that increased productivity of workers could result merely from knowing that they were in a test situation and from the added attention they accordingly received. A woman hired for the first time in what was traditionally a man's job might be motivated to make special efforts that could not be expected of other persons. Also, working primarily with men

might prove either an extremely attractive or unattractive situation which could influence results. In a test situation, the effort should be to eliminate the influence of everything except the one variable being tested. In short, we want to know whether borrowers prefer to have women negotiate their loans, not whether a particular woman can do the job with good results. It would be possible in the day-to-day workings of the bank, but an effective experimental design would undoubtedly conflict with normal work practices which are, after all, set up for the handling of business, not the conduct of experiments. Where improperly handled, a test of this sort can prove both more expensive and less conclusive than some other kinds of experiments. Nevertheless, the person who desires to test a motivation hypothesis would always do well to see whether an experiment in the work situation is possible. Perhaps, after studying the working arrangements of this particular bank, a well controlled experiment could be designed.

If, however, this did not seem feasible because of the time it would take to get results or management's desire for further evidence, a reasonably conclusive test might be set up for the hypothesis, do borrowers prefer to borrow money through women employees, at relatively low cost. The test would take the form of an experiment. Two photographs could be taken that were of an identical loan situation; a borrower sitting at a desk with a small plaque saying "personal loans" on it. In one photograph a woman would be seated behind the desk, at the other a man. If one wished to prevent the appearance of the particular man or woman from influencing results, the face of the person could be eliminated and sex suggested by the hands and arms only. Two additional photographs would be made of other two-person business situations such as a man being waited on by a sales clerk and a woman purchasing a ticket at a theater box office.

These photographs would be arranged in two sets. Set one would have first photograph 1, the man being waited on by the sales clerk; followed by photograph 2, the borrower talking to the woman bank employee; and then photograph 3, the woman buying the theater ticket. Set two would have the same first and third photograph, but the second would show the borrower talking to the male bank employee.

For a scoring method, the semantic differential, developed by Dr. C. E. Osgood of the University of Illinois, could be used. While not the only method of developing quantitative response to complex stimuli, this is one of the most sensitive, having been used with marked success in such clinical situations as scoring Thematic Apperception Test pictures and such down to earth matters as predicting the voting behavior of undecided voters.



NOVEMBER ATLANTA AREA ECONOMIC INDICATORS

ITEM	November 1955	October 1955	% Change	November 1954	% Change
EMPLOYMENT					
Job Insurance (Unemployment)					
Payments	\$187,103	\$191,152	-2.1	\$294,780	-36.5
Job Insurance Claimants†	3,043	3,959	-23.1	4,721	-35.5
Total Non-Agricultural Employment	330,500	327.900*	+0.8	307,900*	+7.3
Manufacturing EmploymentAverage Weekly Earnings,	91,300	91,000*	+0.3	80,700*	+13.1
Factory WorkersAverage Weekly Hours,	\$74.45	\$67.94*	+9.6	\$65.77	+13.2
Factory Workers	42.3	40.2*	+5.2	40.6	+4.2
Number Help Wanted Ads CONSTRUCTION	9,347	11,168	-16.3	6,668	+40.2
Number of Building Permits,					
City of Atlanta Value Building Permits,	737	858	-14.1	635	+16.1
City of Atlanta	\$4,165,426	\$3,408,257	+22.2	\$7,218,847	-42.3
Employees in Contract Construction FINANCIAL	20,150	20,400*	-1.2	17,850*	+12.9
Bank Debits (Millions) Total Deposits (Millions)	\$1,460.6	\$1,496.8	-2.4	\$1,322.3	+10.5
(Last Wednesday) POSTAL§	\$1,046.4	\$1,078.6	-3.0	\$1,025.4	+2.0
Postal Receipts	\$1,608,449	\$1,596,761	+0.7	\$1,528,235	+5.2
Poundage 2nd Class Mail OTHER	1,263,319	1,508,720	-16.3	1,433,368	-11.9
Department Store Sales Index					
(Adjusted) (1947-49=100) Retail Food Price Index	148	141	+5.0	138*	+7.2
(1947-49=100)	108.1	110.1	-1.8	110.5	-2.2
Number of Telephones in Service	269,641	267,962	+0.6	253,395	+6.4
Number of Local Calls per Day	1,814,624	1,841,290	-1.4	1,788,056	+1.5

*Revised
iCity of Atlanta only.

All data on employment, unemployment, hours, and earnings: Employment Security Agency, Georgia Department of Labor;
Number Help Wanted Ads: Atlanta Newspapers, Inc.; Building permits data: Office of the Building Inspector, Atlanta, Georgia;
Financial data: Board of Governors, Federal Reserve System; Postal data: Atlanta Post Office; Retail Food Price Index: U. 3.
Department of Labor; Department Store Sales and Stocks Indexes: Federal Reserve Bank of Atlanta and Board of Governors,
Federal Reserve System; Telephones in Service: Southern Bell Telephone and Telegraph Company.



JANUARY THROUGH NOVEMBER, 1954 and 1955

1955	1954	ITEM	% CHANGE
107,228	74,354	Number Help Wanted Ads §	+44.5
N. A.	N. A.	Department Store Stocks **	+13.0
19,550	17,423	No. Construction Employees *	+12.5
\$15,624.8	\$13,962.1	Bank Debits (Millions)	+11.5
87,127	78,441	No. Manufacturing Employees *	+11.
10,081	9,096	Number Building Permits, City of Atlanta	+10.8
\$68.06	\$62.84	Average Weekly Earnings, Factory Workers *	+8.3
N. A.	N. A.	Department Store Sales, Based on Dollar Amounts **	+7.0
269,641	253,395	Telephones in Service **	+6.4
313,864	297,141	Total Non-Agricultural Employment *	+5.6
15,234,080	14,554,218	Poundage 2nd Class Mail, Atlanta Post Office	+4.7
\$16,020,329	\$15,407,882	Postal Receipts, Atlanta Post Office	+4.0
40.7	39.8	Average Weekly Hours, Factory Workers *	+2.3
\$1,046.4	\$1,025.4	Total Deposits (Millions) **	+2.0
108.1	110.5	Retail Food Price Index (November)	-2.2
\$73,723,448	\$80,718,891†	Value Building Permits, City of Atlanta	-8.7
45,848	60,992	Job Insurance Claimants	-24.8
		Please note correction made in figures for Help Wanted Ads which appeared in the December 1955 issue: 1955—97,881; 1954—67,686; Percentage Change—plus 44.6. * Special ruling permitted construction of \$20,500,000 Grady Hospital addition without permit. If included, total above is \$101,218,891, and the change becomes minus 27.2%.	
		* Average Month ** End of Month	
		N.A.—Not Available	

The semantic differential is simply a seven-point scale that allows an individual to state rather precisely what a picture or word or object means to him in certain relevant terms. While some work includes the use of carefully determined language factors, the problem of bank loans could be handled in a simpler form. Persons borrowing money are probably most concerned with the efficiency, fairness, pleasantness, etc. of the situation. The scales would be set up, then, as follows:

HAPPY --: --: --: --: --: SAD

DANGEROUS --: --: --: --: --: SECURE

PLEASANT --: --: --: --: --: UNPLEASANT

COLD --: --: --: --: --: WARM

EFFICIENT --: --: --: --: --: INEFFICIENT

UNFAIR --: --: --: --: --: FAIR

The exact list of scale used would be derived from two sources. First would be those which referred to the patterns suggested by motivation research. In this case these would be happy-sad, pleasant-unpleasant, warm-cold. Other scales relating to more obvious motivations normally accepted by the industry—and probably overlooked by motivation research—would be added after consultation with managers, who have a rather good notion of many customer desires. These are represented in the above case of such terms as efficient-inefficient, dangerous-secure, and fair-unfair. Of course, this list is only suggestive.

A person scores a picture by making a check on each line in the space that best describes the situation for him. He is told that the spaces in the first line, for instance, mean something like very happy, happy, a little happy, neither happy nor sad, slightly sad, and very sad from left to right. While this may sound a little complicated, it is extremely simple when the appropriate space can be pointed to as the approximate meaning is stated. The person being questioned can in a matter of moments check the spaces on three separate sets of scales for the three photographs. And his response will not be biased by a knowledge of the purpose of the questioning, if he is told that he is helping to determine whether the photographs are right for the illustration for a promotional booklet, let's say. (It is a characteristic of many testing techniques that the subject must not be informed of the purpose of the test. Normally there are no repercussions, but this is a matter that will require special attention in any research use. for obvious reasons.)

The amateur psychologist will notice that this is a projective technique similar to those used in most motivation research. The advantages of such a method lie primarily in the fact that responses on a scale of this sort can be manipulated statistically. While it is not the purpose of this article to consider the statistical methods of motivation research at any length, it is worth pointing out

that the past 20 years has seen the development of powerful statistical tools to determine the significance and accuracy of results derived from research designs. These can be used effectively only when the research project is designed by someone who understands their application. Of particular importance to business is the fact that some of the statistical techniques make it possible to cut costs or increase the amount of information received from an experiment. (The experiment suggested as an example in this paper is really quite wasteful. Further guesses could be tested with only slight additional cost.) In general only the simplest of these techniques are used with the survey method. While this makes excellent sense for most surveys, motivation research problems of many sorts may demand-both for economy and speed of solutionthe use of more complex methods.

With the scales and the photographs prepared, the next step would be to select a sample of potential customers of the bank. It might be worthwhile at this point to mention the importance of sound sampling procedure. Virtually all statistical methods used to determine the relative accuracy of results are based on the assumption that the sample used was truly random. Yet, careless sampling marks much of the survey work being done. As a general standard, small samples well selected are superior to large ones drawn in some haphazard fashion.

A carefully drawn, random sample of 100 would be adequate for comparison in the above case. This sample would be divided randomly into two groups of 50 each. One of these groups would be given the first set of photographs, the other the second set to score. Ordinary interviewers, competent to ask questions for any type of survey work, would be used. And the average interview would take 15 minutes or less. The comparison at this point could be highly meaningful; however, in order to make the controls really sound, one would want to use another standard gimmick of the experimental method.

About two weeks after the survey, each interviewer would return to the persons who had previously been interviewed, explaining that the original response had been lost by someone in the office and that it would mean endless work to select a new sample unless a few interviews could be repeated. Then the person being interviewed would be given the other set of photographs to score. It is highly unlikely that anyone would consciously notice—after a two week delay—this slight difference in one of the photographs.

When this interview was completed, the feelings of each individual sampled toward men and women as bank loan personnel could be analyzed. Each change in response could be noted. Further, chance variations in response could be taken into account since a statistical comparison of responses on the first and third photographs (which remained the same) would be possible. Incidentally, past experience has tended to show that about 85% of repeat answers to the same stimulus are identical in this type of test.

There are numerous advantages to a test of this sort whenever important decisions are to be made. For instance, original motivation research might be correct in stating that persons would be more comfortable negotiating loans with women. They might, however, feel that women were less fair and efficient—and these feelings could easily offset any advantage to be gained by using women. In other words, a method such as this may make it possible to weigh several different factors that can be lost sight of in the less exact methods of motivation research.

Also, it can do a rather good job of stating just how many people feel that women would be more pleasant, warmer, more fair, and happier than men to deal with as bank loan employees. And it can suggest the degree to which this difference exists in personal feelings. Lastly, it has the advantage of being hardly more expensive than the usual type of survey research.

It should be realized that the specific suggestions made above are not the only way in which this hypothesis could be tested. There are many possibilities which should prove sound. And, for other problems, other combinations of methods would have to be developed.

Such methods have not been used on a major scale in business research into motives, although their counterparts are common in the experimental design of production control research. And, while most such work has been conducted from college campuses, a growing portion is supported by business and government.

According to critics of motivation research like N. D. Rothwell it is time that the experimental method be brought off the campus and out of the research foundation in order to establish the limitations of what is called motivation research and reduce the quantities of inconclusive work that characterize it.

Already the pattern is changing. Businessmen are discovering that motivation research at its present level is valuable mostly as a suggestive method which locates areas of private, preconscious, or subconscious motivation. This means, essentially, that where management finds difficulties that cannot be overcome with the usual methods or where it is up against a problem that seems to be meaningless or nonsensical, motivation research is suggested. If workers are dissatisfied despite reasonable wages

and working conditions, coupled with adequate knowledge of the company and its operations, motivation research is indicated. If a product is on the downgrade in spite of apparently sound advertising and merchandising, good distribution and apparent consumer satisfying qualities, motivation research is indicated.

Despite criticism—most of which boils down to the notion that something better will be along soon—the conventional motivation research methods can locate areas of conflict that other methods overlook. And, some businesses need the information now. It would be ridiculous to suggest that such a business should attempt to dig up an experienced experimentalist and provide him with the assistance to carry out the job, for such first-time arrangements can be costly and slow. But it should, at least, be aware of the problems in purchasing motivation research and take care in advance of those that it can.

The problems are several. First, there is no simple rule of thumb to let one know when his operations can be improved by motivation research. Perhaps, the best solution lies in encouraging some members of each company, particularly those in sales, advertising, and personnel work, to read some of the recent writings on the subject. The task should not be difficult, since many persons in these areas are already reasonably well informed on the subject and since much of the work on motivation research makes fascinating reading. (Several references on the subject are contained at the end of this article.)

Second, there are not many research organizations competent to carry out motivation research. The high cost of fully trained interviewers (adequate training for much of this work would include graduate study in psychology or considerable experience—preferably both) has led to the use of persons who are unable to do a reasonably acute job of conducting depth interviews or recording story-telling type answers. In such cases it is all too probable that a considerable amount of fiction finds its way into the final report. It is obvious that in motivation research, as in many other places, it takes a reasonably shrewd buyer to make sound purchases.

Third, motivation research itself is changing rapidly, moving toward better sample selection and experimental techniques as this article has suggested. This means that the prospective user must not only know sources of supply, but must also know the service well enough to select realistically between one research proposal and another.

Such a list of difficulties in a highly technical area would certainly limit the use of motivation research if it were not so obvious that the improved understanding of human motivations and behavior is rapidly becoming one of the areas of

¹ N. D. Rothwell, "Motivation Research Revisited," The Journal of Marketing, October, 1955, p. 153.

Georgia State College of Business Administration

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RETURN POSTAGE GUARANTEED

business competition in which it pays to know more than the other fellow.

SUGGESTED READINGS

"People: What's Behind Their Choices in Buying and Working," Business Week, August 14, 1954, p. 50.

"Behavior Research: To Get the Answers Ask the People," Business Week, August 21, 1954, p. 130.

"What Makes Them Want to Work," Business Week, August 28, 1954, p. 119.

These three parts of a special report by Business Week do an excellent job of briefing the reader on motivation and allied research. Numerous specific cases suggest the kinds of problems that can be handled and the methods being used. Motivation and allied research methods generally well evaluated. Certainly necessary reading for the businessman who wants to keep reasonably well up on developments.

Smith, George Horsley, Motivation Research in Advertising and Marketing, New York, McGraw-Hill, 1954.

This short book contains a careful account of the various methods, depth interview, and projective techniques, which make up the commonly accepted "motivation research" used in business. These techniques and the theories that support them are explained well and simply. No technical knowledge is needed to understand what is a simple and direct presentation.

Merton, Robert K., Mass Persuasion, New York, Harper, 1946.

A classic in the field of motivation, this contains a careful analysis of the reasons why Kate Smith's one day campaigns were climaxed by the sale of more than 100 million dollars in war bonds in less than twenty-four hours. Whether interested in the complexities of research or not, anyone connected with advertising will be well rewarded for the two or three hours it will take to read this. For the researcher, detailed plans, sampling, interviewing, etc. are given.

Miller, James Grier, ed., Experiments in Social Process, New York, McGraw-Hill, 1950.

This relatively short book (195 pages) gives a good account of research techniques and points of view without becoming overly technical. Specific research projects are continually referred to, many of them in the areas of economics and business.

Lindzey, Gardner, ed., Handbook of Social Psychology, 2v., Cambridge, Mass., Addison-Wesley, 1954.

Probably the most complete single source on theories and techniques of experimental research in social psychology, these two volumes are filled with detailed accounts of how to carry out research projects from basic theory to practical application. Somewhat technical in spots for the casual or untrained reader, they contain not only the broadest concept of the subject but a complete bibliography to specific and detailed references. Anyone who intends to participate in motivation research will find these volumes necessary basic reading.

Newcomb, T. M. and Hartley, E. L., Readings in Social Psychology, Rev. Ed., New York, Henry Holt, 1952.

This collection of readings includes reports of a large variety of experiments, many of which make fascinating reading in themselves. Applications to business research are not explicit, but the person interested in carrying out research will find this work loaded with methods which can help him determine motives and behavior.